PRESYS®

Instrumentation and Process Control

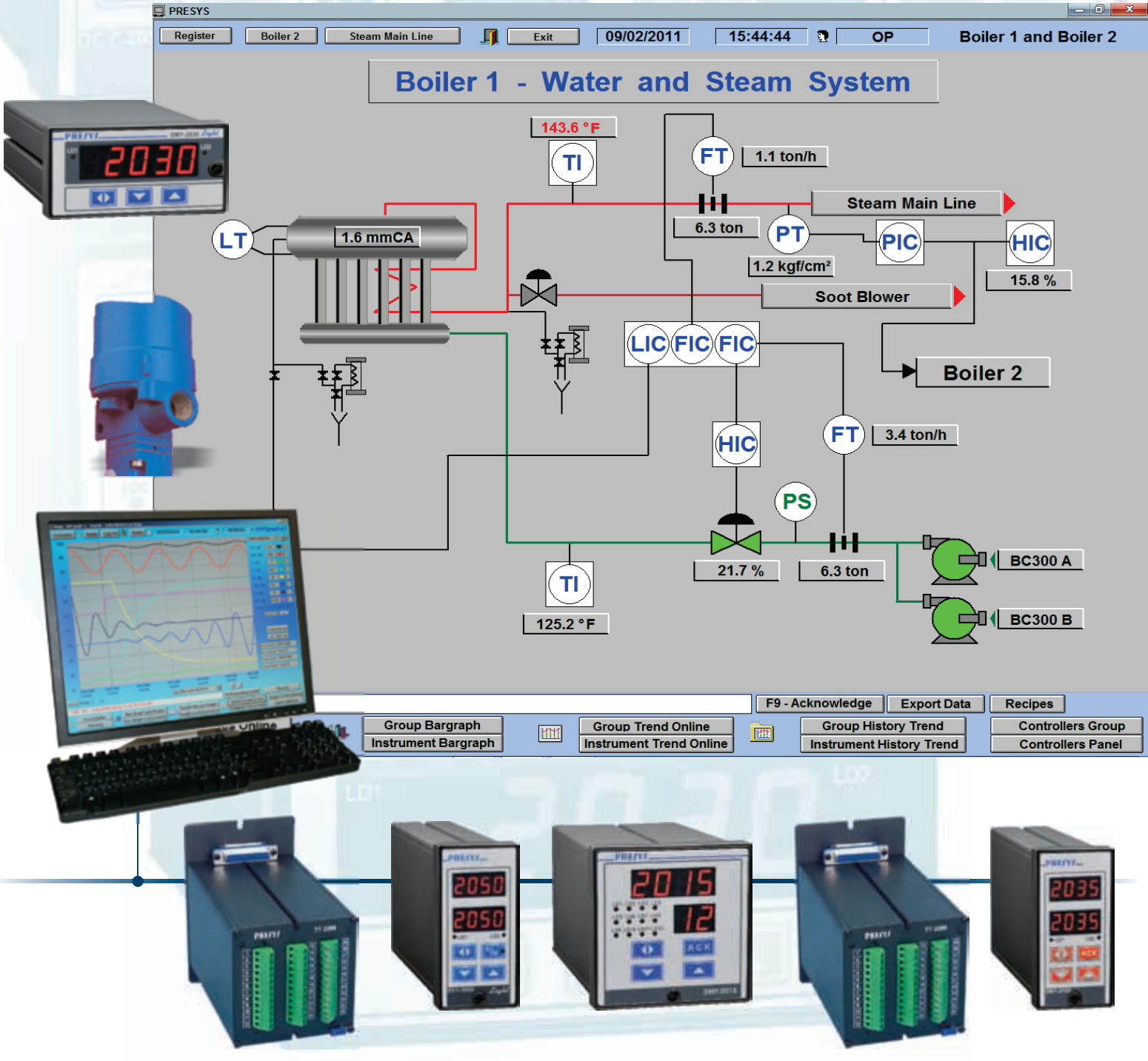


TABLE OF CONTENTS

page

Digital Multi-point Indicator DMY-2015 and DMY-2015-PB

PROFIBUS®

- Models available for:
  - 12 THERMOCOUPLE INPUTS.
  - 8 RTD INPUTS.
  - 12 CURRENT INPUTS 4-20 mA.
  - 12 VOLTAGE INPUTS 1-5 Vdc.
  - COMBINATION OF 2 INPUT TYPES.
- Totalization function.
- Many optional Modules are available:
  - Up to 2 SPDT relays alarm modules.
  - One retransmitter output 1-5 Vdc, 4-20 mA or 0-10 Vdc, which can retransmit any input signal or the mean of selected channels configuration. (item upon request).
  - Galvanic isolation between inputs, outputs and power supply.
  - Isolation between inputs is also available upon request.
  - RS-232, RS-422/485 Communication (MODBUS® RTU Protocol) or PROFIBUS® (DP-V0)*.
  - Aspersion-proof front-panel.
- Configurable display for up to 4-digit of high visibility for the process variable indication. Another display shows which channel is being displayed. Still has twelve LEDs that may indicate alarm states for each channel.

*Only available for DMY-2015-PB model.

Order Code _____ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Model
DMY-2015
DMY-2015-PB

Inputs
0 - 12 TC inputs
1 - 8 RTD inputs
2 - 6 TC and 4 RTD inputs
3 - 12 current inputs
4 - 12 voltage inputs
5 - 6 TC and 6 current inputs
6 - 6 TC and 6 voltage inputs
7 - 6 current and 6 voltage inputs
8 - 6 current and 4 RTD inputs
9 - 6 voltage and 4 RTD inputs

Output 1
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 2
Same code as output 1

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - MODBUS (RS-232)*
2 - MODBUS (RS-485)*
3 - MODBUS (RS-422)*
4 - PROFIBUS DP-V0 (RS-485)**

Case Protection Grade
0 - General usage, protected place
1 - Front aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (EX d IIB T6 Gb IP 66), horizontal display***

* Available only for DMY-2015 model
** Available only for DMY-2015-PB model

*** Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg approx.

Specifications

Inputs
Thermocouple (J, K, T, E, R, S under ITS-90).
RTD Pt-100 under DIN 43760.
4-20 mA with input impedance of 250 Ω.
1 to 5 Vdc with input impedance >10 MΩ.

Outputs
Up to 2 SPDT relays rated for 3A/220 Vac.
Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
DMY-2015: RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.
DMY-2015-PB: PROFIBUS® DP-V0: RS-485 Communication.

Indication
4-digit red leds display (14 mm) for process variable indication. 2-digit display for channel indication. 12 red leds for alarm indication.

Totalization
Totalization of eight voltage or current inputs ranging from 0 to 9999, configured with the decimal point.

Configuration
By front-panel push-buttons

Sampling Rate
480 ms standard, for all inputs. One second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, Vdc.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for input above 10 % of span. Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C in ambient temperature range from 0 to 60 °C.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.

Weight
0.7 kg nominal.

Warranty
One year.

Universal Digital Indicator Single

DMY-2030-*Light*

- DMY-2030-Light: Universal input for RTD, thermocouples, 0-55 mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- 4 ½ digit display of high visibility.
- Linearization for RTD and TC, square root extraction function.
- Power supply of 75-264 Vac, 50/60 Hz or 100 to 360 Vdc; 24 Vac/dc and 12 Vdc, as ordered.
- Fully configurable by front-panel push-buttons. Configuration stored in non-volatile memory.
- Many optional modules are available:
  - Analog output modules of 4-20 mA, 1-5 Vdc and 0-10 Vdc.
  - Up to 2 SPDT relay alarm modules.
  - Aspersion-proof front-panel.
  - Communication RS-232 or RS-422/485 with computer.
- High accuracy.

Order Code

DMY - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model
2030-Light

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc

Output 2
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 3
Same code as Output 2

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*

* Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg approx.

Specifications

Inputs
Configurable for TC (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD under DIN 43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. Input impedance of 250 Ω for mA, >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Galvanically isolated module to 300 Vac from power supply and inputs. Up to 2 SPDT relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
4 ½ digit red leds display (14 mm).

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
64 ms standard.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs.
± 0.5 % of full scale for analog retransmitter output.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extration
± 0.5 % of reading, for inputs above 10 % of span. Programmable cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C in ambient temperature range from 0 to 60 °C.

2-Wire Transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output, with short-circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature

Power supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Ambient
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal.

Warranty
One year.

Frequency Digital Indicator Single DMY-2030-F-*Light*

- Input frequency up to 30 kHz, from 300 mVpp to 30 Vpp.
- 4 1/2 digit display of high visibility.
- Power supply of 75-264 Vac, 50/60 Hz or 100 to 360 Vdc; 24 Vac/dc and 12 Vdc, as ordered.
- Fully configurable by front-panel push-buttons. Configuration stored in non-volatile memory.
- Many optional modules are available:
  - Analog output modules of 4-20 mA, 1-5 Vdc and 0-10 Vdc.
  - Up to 2 digital output modules with SPST relay + 2 with SPDT relay modules.
  - Aspersion-proof front-panel.
  - Communication RS-232 or RS-422/485 with computer
- High accuracy.

Order Code

DMY - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model

2030-F-Light: Frequency Input.

Output 1

0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2

0 - None
1 - SPST Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 3

0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4

Same code as Output 3

Power Supply

1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication

0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade

0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*

* Explosion-proof box:

Dimensions
310 x 310 x 200 mm (HxWxD)

Weight
11 kg approx.

Specifications

Input
One frequency input to connect signals in the wave shapes sine, square, triangle, pulse with amplitude between 300 mVpp and 30 Vpp and dry contact input. 70 Vdc maximum voltage. Input impedance greater than 60 kΩ (sine wave, 1 kHz).

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Galvanically isolated module to 300 Vac from power supply and inputs. Up to 2 SPDT + 2 SPST relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
4 ½ digit red leds display (14 mm).

Configuration
By front-panel push-buttons and internal jumpers

Sampling Rate
71 ms standard.
Half second display update rate.

Accuracy
± 1 Display resolution for input.
± 0.5 % of full scale for analog retransmitter output.

Power Supply for frequency sensors
24 Vdc / 50 mA maximum, isolated from output with short-circuit protection.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal.

Warranty
One year.

Universal Process Indicator Dual

DMY-2030 / DMY-2030-F

- DMY-2030 / 2011 / 2035 / 2036:
  Two universal inputs for RTD, TC, mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- DMY-2030F / 2011F / 2035F / 2036F:
  Two frequency inputs up to 30 kHz, from 300 mVpp to 30 Vpp.
- High visibility displays.
- Linearization for RTD and thermocouple. Square root extraction.
- Configuration stored in non-volatile memory.
- Many optional modules are available:
  - Up to 2 analog output modules 4-20 mA, 1-5 Vdc, 0-10 Vdc.
  - Up to 2 SPST relay modules + up to 2 SPDT relay modules.
  - Aspersion-proof front-panel.
  - Communication RS-232 or RS-422/485 with computer
- Simultaneous display of channels on models with two displays.

DMY-2011 /
DMY-2011-F

DMY-2035 /
DMY-2035-F

DMY-2036 / DMY-2036-F

Order Code DMY [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model
2030 - Universal Inputs
2011 - Universal Inputs
2035 - Universal Inputs
2036 - Universal Inputs
2030-F - Frequency Inputs
2011-F - Frequency Inputs
2035-F - Frequency Inputs
2036-F - Frequency Inputs

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
Same code as Output 1

Output 3
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*
4 - Explosion-proof (Ex d IIB T6 Gb IP 66), vertical display*

* Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg approx.

Specifications

Inputs
DMY-2030/2011/2035/2036: Two configurable inputs for thermocouple (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD Pt-100 under DIN 43760, 4-20 mA,1-5 Vdc and 0-10 Vdc. 4-20 mA with input impedance of 250 Ω. >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.
DMY-2030-F/2011-F/2035-F/2036-F: Two frequency inputs for signals up to 30 kHz, from 300 mVpp to 30 Vpp.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Up to 2 galvanically isolated modules to 300 Vac from power supply and inputs. Up to 2 SPDT relay modules and up to 2 SPST relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Note: In the case of using an analog output, one can use three alarm modules, or when using two analog outputs, one can use up to two alarm modules.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
DMY-2030/2030-F: 4 ½ digit red leds display (14 mm).
DMY-2011/2011-F: 2 x 4-digit red leds display (14 mm).
DMY-2035/2035-F: 2 x 4-digit red leds display (9 mm).
DMY-2036/2036-F: 2 x 4-digit red leds display (14 mm and 9 mm). Can be configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers

Sampling Rate
120 ms standard. One second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc.
± 0.5 % of full scale for analog retransmitter output.
± 1 Display resolution for frequency input.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for input above 10 % of span. Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C in ambient temperature range from 0 to 60 °C.

2-wire Transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output with short circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
DMY-2030/2030-F:1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout .
DMY-2011/2011-F:1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout .
DMY-2035/2035-F: 1/8 DIN (96 x 48 x 187 mm) HxWxD, (92 x 45 mm) HxW panel cutout .
DMY-2036/2036-F: 1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout .

Weight
0.5 kg nominal (DMY-2030/2030-F/2035/2035-F/2036/2036-F)
0.6 kg nominal (DMY-2011/2011-F).

Warranty
One year.

Process Indicator and Totalizer Single

DMY-2030-TOT-*Light*
DMY-2030-TOT-F-*Light*

- DMY-2030-TOT-Light: One universal input.
- DMY-2030-TOT-F-Light: One frequency input.
- 8-digit configurable display.
- Digital input for partial totalization reset.

Order Code DMY - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Model
2030-TOT-Light: mV, V, mA input.
2030-TOT-F-Light: Frequency input.

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
Same code as Output 1

Output 3
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General Usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*

* Explosion-proof box:
Dimensions: 310 x 310 x 200 mm (HxWxD)
Weight: 11 kg nominal

Specifications

Inputs
DMY-2030-TOT-Light: Configurable input for 0-55 mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc. 4-20 mA with input impedance of 250 Ω. >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.
DMY-2030-TOT-F-Light: frequency input for signals up to 30 kHz, from 300 mVpp to 30 Vpp digital input. 70 V maximum DC voltage. Input impedance greater than 60 kΩ (sine, 1 kHz).

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Up to 2 galvanically isolated modules to 300 Vac from power supply and inputs. Up to 2 SPDT relay modules and up to 2 SPST relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
8-digit red leds display (9 mm) for totalization and 5-digit for indication. Can be configured together with the decimal point.

Totalization Range
0 to 99999999 configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
120 ms standard. One second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc.
± 0.5 % of full scale for analog retransmitter output.
± 1 Display resolution for frequency input.

Linearization
14 configurable input points.

Square Root Extraction
± 0.5 % of reading, for input above 10 % of span. Programmable Cut-off from 0 to 5 %.

2-wire Transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output with short circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal.

Warranty
One year.

Process Indicator and Totalizer Dual

DMY-2030-TOT
DMY-2030-TOT-F

- DMY-2030-TOT: Two inputs for mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- DMY-2030-TOT-F: Two frequency inputs up to 30 kHz, from 300 mVpp to 30 Vpp.
- 8-digit display.

Order Code **DMY –** [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model
2030-TOT: mA, Vdc and mV inputs
2030-TOT-F: Frequency inputs

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
Same code as Output 1

Output 3
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10%)
3 - 12 Vdc (±10%)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*

* Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
DMY-2030-TOT: Two configurable inputs 0-55 mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc. 4-20 mA with input impedance of 250 Ω. >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.

DMY-2030-TOT-F: Two frequency inputs for signals up to 30 kHz, from 300 mVpp to 30 Vpp.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Up to 2 galvanically isolated modules to 300 Vac from power supply and inputs. Up to 2 SPDT relay modules and up to 2 SPST relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
8-digit red leds display (9 mm) for totalization and 5-digit for indication. Can be configured together with the decimal point.

Totalization Range
0 to 99999999 configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
120 ms standard. One second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc.
± 0.5 % of full scale for analog retransmitter output.
± 1 Display resolution for frequency input.

Square Root Extraction
± 0.5 % of reading, for input above 10 % of span. Programmable Cut-off from 0 to 5 %.

2-wire Transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output with short circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout .

Weight
0.5 kg nominal.

Warranty
One year.

Process Counter DUAL
DMY-2030-TOT-FCS
DMY-2031-FCS

- Ideal for counting of sacks, barrels, etc. or pulses of any sector.
- Up to four digital output modules with SPDT and SPST relays.
- RS-232 or RS-422/485 Communication.
- DMY-2030 -TOT-FCS: Up to 8-digit configurable display.
- DMY-2031-FCS: Two 4-digit displays (14 mm and 9 mm).
- Robust construction in order to withstand the harshest conditions of industrial use.
- Universal power supply of 75 to 264 Vac, 50/60 Hz or 100 to 360 Vdc; 24 Vac/dc and 12 Vdc, as ordered.
- Aspersion-proof Front-panel (optional).
- Configuration stored in non-volatile memory.

Order Code DMY- [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model

2031-FCS: 2 x 4-digit display
2030-TOT-FCS: 1 x 8-digit display

Output 1

0 - None
1 - SPST Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 2

Same code as Output 1

Output 3

0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4

Same code as Output 3

Power Supply

1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 -Others upon request

Communication

0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade

0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d II B6 Gb IP 66), horizontal display*

*Explosion-proof box:

Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs

Frequency inputs for signals up to 500 Hz, from 300 mVpp to 30 Vpp. DIN 19234 compliance for intrinsically safe NAMUR sensors.

Outputs

SPST and SPDT relays rated for 3A/220 Vac.
Plug provided for up to 4 modules. Logic Signal, open collector transistor, 24 Vdc/40 mA, maximum with isolation. Solid State Relay, 2A/250 Vac with isolation.

Serial Communication

RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication

DMY-2031-FCS: Two 4-digit red leds displays (9 and 14 mm).
DMY-2030-TOT-FCS: One 8-digit red leds display (9 mm).
Can be configured together with the decimal point.

Totalization Range

DMY-2031-FCS: 0 to 9999 counts.
DMY-2030-TOT-FCS: 0 to 99999999 counts.
Can be configured together with the decimal point.

Configuration

By front-panel push-buttons and internal jumpers.

2-wire Transmitter Power Supply

24 Vdc/50 mA maximum, isolated from output with short circuit protection.

Power Supply

75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range

0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions

1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight

0.5 kg nominal.

Warranty

One year.

Universal Process Indicator (Large Digits) DMY-2032 and DMY-2032-F

- Display of 4 large digits (57 mm) that allows easy viewing up to 20 meters away.
- DMY-2032: two universal inputs
- DMY-2032-F: two frequency inputs.
- Other specifications are identical to the DMY-2030 and DMY-2030-F and same order code, in model field fill as DMY-2032 or DMY-2032-F.
- Has characteristics that are common to Presys Line 2000: DMY-20XX, DCY-20XX and TY-20XX.

Digital Indicator for Load Cell DMY-2030-CC

- Specially developed for use with load cell.
- Input range from -30 mV to 30 mV.
- Indication with peak hold, minimum and maximum.
- 10V / 100mA power supply for load cell.
- TARE function configurable.

Order Code **DMY-2030-CC -** ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 3
Same code as Output 2

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*

* Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
One -30 to 30 mV input.
Input impedance >10 MΩ.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Galvanically isolated module to 300 Vac from power supply and inputs, one SPST relay module (replacing the analog output) and up to 2 SPDT relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
4 ½ digit red leds display (14 mm).
Can be configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
64 ms standard.

Accuracy
± 0.1 % of full scale for inputs.
± 0.5 % of full scale for analog retransmitter output.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply for load cell
10 Vdc/100 mA.

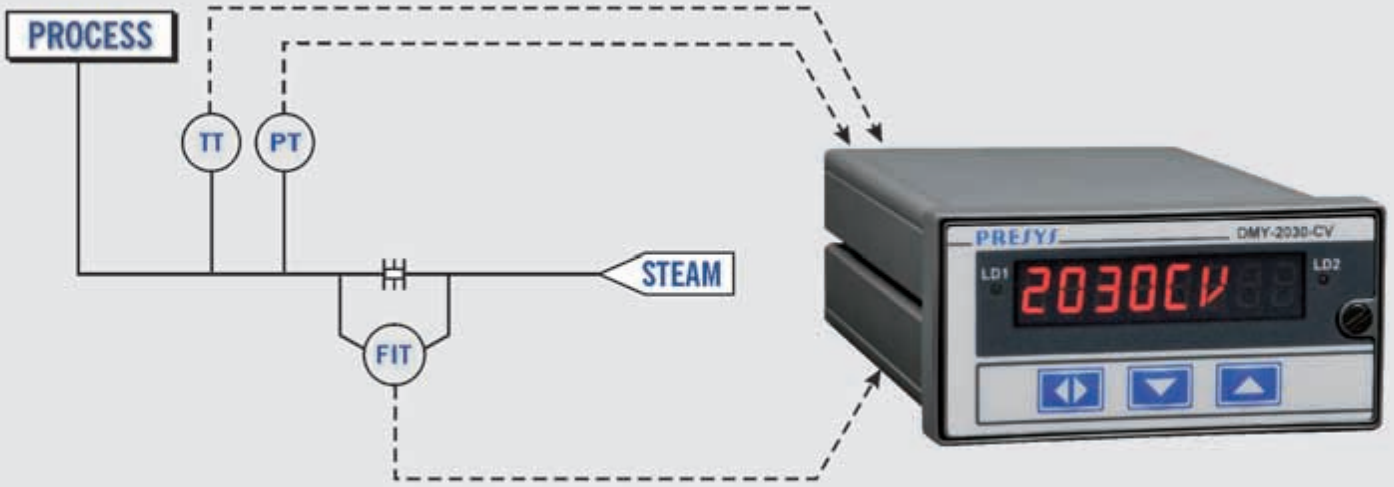
Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc
(10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Ambient
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal.

Warranty
One year.



Flow Calculator DMY-2030-CV

- Three 4-20mA and 1-5Vdc standard inputs for flow, temperature and pressure signals.
- Calculation of flow rate with/without temperature and/or pressure correction, with/without squared root extraction.
- Totalization of the corrected flow and preset.
- Flow signal linearization up to 21 points.
- Includes water steam table.

Flow Measurement Solution with Temperature and Pressure Compensation Integrated with Totalization

The flow measurement using the principle of differential pressure orifice plate is one of the methods most frequently used involving transport of fluids and gases. The method is very widespread, this is due to the following factors:

- Simplicity and low cost of installation;
- Easy maintenance for measuring elements;
- Low values of measurement uncertainties.

Flow measurement by differential pressure has many potential uses and application, mainly by the use of flow measurement compensated in pressure and temperature.

The Flow Calculator DMY-2030-CV has extruded aluminum metal case. Provides three inputs which can be used for connection with standard analog signals from the differential pressure sensors, gauge pressure and temperature, and is also the standard 24 Vdc power supply for two-wire transmitter. Presents the signs of the three inputs through 5 digits, performing the aggregation of flow corrected with 8-digit count, and have reset by the front panel or through external dry contact.

Order Code DMY-2030-CV - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Model

Output 1
- 0 - None
- 1 - 4-20 mA
- 2 - 1-5 Vdc
- 3 - 0-10 Vdc
- 4 - SPST Relay
- 5 - Open Collector Voltage
- 6 - Solid State Relay

Output 2
- 0 - None
- 1 - SPST Relay
- 2 - Open Collector Voltage
- 3 - Solid State Relay

Output 3
- 0 - None
- 1 - SPDT Relay
- 2 - Open Collector Voltage
- 3 - Solid State Relay

Output 4

Same code as Output 3

Power Supply
- 1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
- 2 - 24 Vac or 24 Vdc (±10 %)
- 3 - 12 Vdc (±10 %)
- 4 - Others, upon request

Communication
- 0 - None
- 1 - RS-232
- 2 - RS-485
- 3 - RS-422

Case Protection Grade
- 0 - General usage, protected place
- 1 - Front Aspersion-proof
- 2 - Weather-proof - IP 66
- 3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*

*Explosion-proof box:

Dimensions
310 x 310 x 200 mm (HxWxD)

Weight
11 kg nominal

Specifications

Inputs
Three configurable inputs for 4-20 mA, 1-5 Vdc. 250 Ω input impedance for mA and >10 MΩ for 5 Vdc.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Galvanically isolated module to 300 Vac from power supply and inputs. Up to 2 SPST relay modules and up to 2 SPDT relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Protocol

Indication
8-digit red leds display (9 mm) for totalization and 5 digits for indication. Can be configured together with the decimal point.

Totalization
0 to 99999999. Can be configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
120 ms standard. One second display update.

Accuracy
± 0.1 % of full scale for mA and Vdc inputs.
± 0.5 % of full scale for analog retransmitter output.

Square Root Extraction
± 0.5 % of reading, for input above 10 % of span. Programmable Cut-off from 0 to 5 %.

2-wire Transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output with short circuit protection

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Ambient
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal.

Warranty
One year.

Pressure Indicator Single
DMY-2017-*Light*

- An input for pressure, use with gases and liquids.
- Range from 250 mmH_2O to 5000 psi, gauge pressure, absolute or vacuum.
- Other characteristics in common to the line 2000 (DMY-20XX; DCY-20XX; TY-20XX).

Pressure Indicator Dual DMY-2017

- Two inputs for pressure, use with gases and liquids.
- Range from 250 mmH_2O to 5000 psi, gauge pressure, absolute or vacuum.
- Other characteristics in common to the line 2000 (DMY-20XX; DCY-20XX; TY-20XX).

Order Code DMY - [ ] - [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Model
2017-Light
2017

Input 1

Range
1 - 0 to 250 mmH_2O — Only non-corrosive gases
2 - 0 to 1 psi — Only non-corrosive gases
3 - 0 to 5 psi — Only non-corrosive gases
4 - 0 to 15 psi — Fluids compatible with 316 stainless steel
5 - 0 to 30 psi — Fluids compatible with 316 stainless steel
6 - 0 to 100 psi — Fluids compatible with 316 stainless steel
7 - 0 to 250 psi — Fluids compatible with 316 stainless steel
8 - 0 to 500 psi — Fluids compatible with 316 stainless steel
9 - 0 to 1000 psi — Fluids compatible with 316 stainless steel
10 - 0 to 3000 psi * — Fluids compatible with 316 stainless steel
11 - 0 to 5000 psi * — Fluids compatible with 316 stainless steel

Pressure Type
1 - Gauge
2 - Absolute
3 - Vacuum (0 to 1 atm)

Sensor Type
1 - For air or non-corrosive gases
2 - For fluids compatible with 316 stainless steel

Input 2
Only for the model DMY-2017
Same code as Input 1 when used for pressure.
When not being used for pressure, or if the model is DMY-2017-Light, fill the blanks with 0-0-0 and it can be used as analog auxiliary input for Vdc, mA, RTD, TC.

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
Same code as Output 1 (Only for the model DMY-2017)

Output 3
0 - None
1 - SPDT relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66

* Provided only with remote display.

Specifications

Inputs
DMY-2017-Light: One pressure input.
DMY-2017: One or two pressure inputs.
Input for gauge, absolute pressure or vacuum.
Ranges from 250 mmH_2O to 5000 psi (gauge pressure).
Ranges from 15 psi to 1000 psi (Absolute pressure).
Ranges from 1 atm (Vacuum). Use with compressed air and non-corrosive / conductive gases up to 5 psi.
Air or fluids compatible with 316 stainless steel above 5 psi.
DMY-2017: Auxiliar analog input (for simple version only), configurable for thermocouple (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD under DIN 43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. 250 Ω input impedance for mA, >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Up to 2 galvanically isolated modules to 300 Vac from power supply and inputs. SPDT and SPST relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Note: Slot provided for up to 4 alarm modules (taking the two slots of the analog outputs).

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation.
MODBUS®-RTU Communication Protocol.

Indication
4-digit red leds display (14 mm). Can be configured together with the decimal point.

Engineering Units
psi, atm, inH_2O, kgf/cm^2, mH_2O, mmH_2O, inHg, mmHg, cmHg, bar, mbar and kPa.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
120 ms standard. One second display update rate.

Accuracy
± 1 % of full scale for 250 mmH_2O range.
± 0.1 % of full scale for the other ranges.
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs.
± 0.5 % of full scale for analog retransmitter output.
750 Ω maximum load.

2-wire Transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output with short circuit protection

Span Temperature Coefficient
± 0.01 % of span / °C for pressure inputs.
± 0.005 % of span / °C for auxiliar analog inputs.
Reference 25 °C.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.

Pneumatic / hydraulic connection
1/4" Union for plastic tubing for use with air or
1/4" Female NPT for use with other fluids.

Weight
1.0 kg nominal.

Warranty
One year.

DCY-2060-*Light* /
DCY-2060-F-*Light*

DCY-2050-*Light* /
DCY-2050-F-*Light*

DCY-2051-*Light* /
DCY-2051-F-*Light*

Universal Process Controllers - Single Loop

- Universal standard input for RTD, thermocouples, 0-55 mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc and remote setpoint input for 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- F-Light version for frequency inputs up to 30 kHz, from 300 mVpp to 30 Vpp.
- Up to 2 universal output modules for 4-20 mA, 1-5 Vdc and 0-10 Vdc, one for control and one for retransmission, relay, solid state relay and open collector voltage, isolated from inputs and power supply.
- High control capacity, performing the functions of:
  - Auto-Tune.
  - ON-OFF, P-PI-PD-PID, ratio control.
  - Heating-cooling, time-proportional.
  - Remote setpoint, programmable setpoint up to ten segments.
  - Auto/manual station.
- Several optional:
  - Up to 2 SPDT + 2 SPST relay alarm modules;
  - RS-232 or RS-422/485 Communication;
- Linearization for RTD and TC and also square root extraction.
- Configuration stored in non-volatile memory.

Order Code DCY - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model
2050-Light: Universal Input
2051-Light: Universal Input
2060-Light: Universal Input
2050-F-Light: Frequency Input
2051-F-Light: Frequency Input
2060-F-Light: Frequency Input

Output 1 (Only for Control)
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
(Retransmitter or auxiliar cooling control)
Same code as Output 1

Output 3 (Alarm)
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4 (Alarm)
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*
4 - Explosion-proof (EX d IIB T6 Gb IP 66), vertical display*

* Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
DCY-2050-Light / 2051-Light / 2060-Light: Configurable input for thermocouple (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD Pt-100 under DIN43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. Input for remote setpoint configurable for 4-20 mA, 1-5 Vdc and 0-10 Vdc. 250 Ω input impedance for mA, >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.
DCY-2050-F-Light / 2051-F-Light / 2060-F-Light: Frequency input for signals up to 30 kHz, from 300 mVpp to 30 Vpp. DIN-19234 compliance for intrinsecally safe NAMUR sensors.

Control Function
ON-OFF, PID, PID with AUTO-TUNE, Heating-cooling, Heating-cooling proportional, Ratio, Remote Set point and programmable set point.

Control Outputs
Analog 4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc. One optional module galvanically isolated to 300 Vac from power supply and inputs. SPST relay rated for 3A/220 Vac. Open collector transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac with isolation).

Alarm Outputs
SPDT relay rated for 3A/220 Vac. Open collector transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac with isolation).

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
DCY-2050-Light / 2050-F-Light: Two 4-digit displays (9 mm).
DCY-2051-Light / 2051-F-Light: Two 4-digit displays (14 mm / 9 mm).
DCY-2060-Light / 2060-F-Light: Two 4-digit displays (14 mm).
Can be configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
130 ms standard. Half second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs.
± 0.5 % of full scale for analog retransmitter output.
± 1 display resolution for frequency input.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for inputs above 10 % of span. Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C at range from 0-60 °C ambient temperature.

2-wire transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output, with short circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
DCY-2050-Light/2050-F-Light: 1/8 DIN (96 x 48 x 187 mm) HxWxD, (92 x 45 mm) HxW panel cutout.
DCY-2051-Light/2051-F-Light: 1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.
DCY-2060-Light/2060-F-Light: 1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal (DCY-2050-Light/2050-F-Light/2051-Light/2051-F-Light).
0.6 kg nominal (DCY-2060 Light/2060-F-Light).

Warranty
One year.

DCY-2060 / DCY-2060-F

DCY-2050 / DCY-2050-F

DCY-2051 / DCY-2051-F

Universal Process Controllers - Dual Loop

- Two standard universal inputs for RTD, thermocouples, 0-55 mV, 4-20 mA,1-5 Vdc and 0-10 Vdc.
- F versions for frequency inputs up to 30 kHz, from 300 mVpp to 30 Vpp.
- Up to 2 universal output modules for 4-20 mA, 1-5 Vdc and 0-10 Vdc, one for control and one for retransmission, relay, solid state relay and open collector voltage isolated from inputs and power supply.
- Reduced dimensions and high control capacity, performing the functions of:
  - Auto-Tune.
  - ON-OFF, P-PI-PD-PID, ratio, cascade control.
  - Heating-cooling, time-proportional.
  - Remote setpoint, programmable setpoint up to ten segments.
  - Auto/manual station.
- Several optional:
  - Up to 3 SPDT and SPST relay alarm modules;
  - RS-232 or RS-422/485 Communication;
- Linearization for RTD and TC and also square root extraction.
- Configuration stored in non-volatile memory.
- Also available in the model DCY-2055, without local indication, configurable via serial communication or through portable programmer.

Order Code DCY - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model
2050: Universal Inputs
2051: Universal Inputs
2060: Universal Inputs
2055: Universal Inputs (without local indication)
2050-F: Frequency Inputs
2051-F: Frequency Inputs
2060-F: Frequency Inputs

Output 1 (Only for Control)
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2 (Control or Alarm)
Same code as Output 1

Output 3 (Alarm or aux. cooling control 1)
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4 (Alarm or aux. cooling control 2)
Same code as output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*
4 - Explosion-proof (EX d IIB T6 Gb IP 66), vertical display*

* Explosion-proof box:

Dimensions
310 x 310 x 200 mm (HxWxD)

Weight
11 kg nominal

Specifications

Entradas
DCY-2050 / 2051 / 2060 / 2055: Configurable inputs for thermocouple (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD Pt-100 under DIN43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. Input for remote setpoint configurable for 4-20 mA, 1-5 Vdc and 0-10 Vdc. 250 Ω input impedance for mA, >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.

DCY-2050-F / 2051-F / 2060-F:
Frequency inputs for signals up to 30 kHz, from 300 mVpp to 30 Vpp. DIN-19234 compliance for intrinsecally safe NAMUR sensors.

Control Functions
ON-OFF, PID, PID with AUTO-TUNE, Heating-cooling, Ratio, Cascade, Remote Set point and programmable set point.

Control Outputs
Analog 4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc. Up to two optional module galvanically isolated to 300 Vac from power supply and inputs. SPST relay rated for 3A/220 Vac. Open collector transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac with isolation).

Alarm Outputs
SPDT relay rated for 3A/220 Vac. Open collector transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac with isolation).

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
DCY-2050 / 2050-F: Two 4-digit displays (9 mm).
DCY-2051 / 2051-F: Two 4-digit displays (14 mm / 9 mm).
DCY-2060 / 2060-F: Two 4-digit displays (14 mm).
DCY-2055: Without local indication.
Can be configured together with the decimal point.

Configuration
DCY-2050 / DCY-2051 / DCY-2060: By front-panel push-buttons and internal jumpers. DCY-2055: Via serial communication or MCY-25 configuration module.

Sampling Rate
130 ms standard. Half second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs.
± 0.5 % of full scale for analog retransmitter output.
± 1 display resolution for frequency input.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for inputs above 10 % of span. Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C at range from 0-60 °C ambient temperature.

2-wire transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output, with short circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C for auxiliar input .Reference temperature: 25 °C.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
DCY-2050 / 2050-F: 1/8 DIN (96 x 48 x 187 mm) HxWxD, (92 x 45 mm) HxW panel cutout.
DCY-2051 / 2051-F: 1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.
DCY-2060 / 2060-F: 1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.
DCY-2055: (140 x 53 x 175 mm) HxWxD.

Weight
0.5 kg nominal (DCY-2050/2051)
0.6 kg nominal (DCY-2060/2055)

Warranty
One year.

3 Elements Digital Controller for Boiler Level

DCY-2050-LC / DCY-2051-LC DCY-2060-LC

- 3 Elements control: boiler level, water flow and steam flow.
- Three standard inputs for 4-20 mA and 1-5 Vdc, configurable.
- Two analog outputs for 4-20 mA, 1-5 Vdc and 0-10 Vdc, one for control 3 elements control and one for 2 elements control.

Order Code DCY - [ ] -LC- [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model
2050: 1/8 DIN case, vertical display
2051: 1/8 DIN case horizontal display
2060: 1/4 DIN case.

Output 1 (2 elements control)
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc

Output 2 (3 elements control)
Same code as Output 1

Output 3 (Alarm)
0 - None
1 - SPDT Relay
2 - Open Collector
3 - Solid State Relay

Output 4 (Alarm)
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*
4 - Explosion-proof (EX d IIB T6 Gb IP 66), vertical display*

* Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
Configurable for 4-20 mA and 1-5 Vdc. 250 Ω input impedance for mA and >10 MΩ for 5 Vdc.

Functions
P-PI-PD-PID Control. Flow totalization. Auto/Manual Station.

Control Outputs
Analog 4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc, configurable.

Alarm Outputs
Up to 2 SPDT rated for 3A/220 Vac.
Open collector transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac with isolation).

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
DCY-2050-LC: Two 4-digit displays (9 mm).
DCY-2051-LC: Two 4-digit displays (14 mm/9 mm).
DCY-2060-LC: Two 4-digit displays (14 mm).
Can be configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
120 ms standard. Half second display update rate.

Accuracy
± 0.1 % of full scale for mA and Vdc inputs.
± 0.5 % of full scale for analog output.

Square Root Extraction
± 0.5 % of reading, for inputs above 10 % of span. Programmable Cut-off from 0 to 5 %.

2-wire Transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output, with short circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C for auxiliar input. Reference temperature: 25 °C.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal);
24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
DCY-2050-LC: 1/8 DIN (96 x 48 x 187 mm) HxWxD, (92 x 45 mm) HxW panel cutout.
DCY-2051-LC: 1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.
DCY-2060-LC: 1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal (DCY-2050-LC/2051-LC) / 0.6 kg nominal (DCY-2060-LC).

Warranty
One year.

Auto/Manual Station DCY-2058 / DCY-2059

- Two standard inputs for 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- Up to 2 analog outputs for 4-20 mA, 1-5 Vdc and 0-10 Vdc, galvanically isolated from inputs and power supply.
- Configuration stored in non-volatile memory.
- Configurable as Auto-Manual Station, Manual Station or Automatic Station.
- 11 linearization points of the output signal.
- RS-232 or RS-422/485 Communication.
- Universal Power Supply: 75 to 264 Vac, 50/60 Hz, 24 Vac/dc or 12 Vdc, as ordered.

Order Code DCY- [ ] - [ ] - [ ] - [ ] - [ ]

Model
2058: 1/8 DIN case, vertical display
2059: 1/8 DIN case, horizontal display

Version
1 - Single Loop
2 - Dual Loop

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Others, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), horizontal display*
4 - Explosion-proof (Ex d IIB T6 Gb IP 66), vertical display*

* Explosion-proof box:

Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
Two configurable inputs for 4-20 mA, 1-5 Vdc and 0-10 Vdc, selected by the user. 250 Ω input impedance for mA, >10 MΩ for 5 Vdc and 2 MΩ above 5 Vdc.

Outputs
Analog 4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc. Up to 2 optional modules galvanically isolated to 300 Vac from power supply and inputs

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
DCY-2058: Two 4-digit red leds display (9 mm).
DCY-2059: Two 4-digit red leds display (9 mm and 14 mm).
Can be configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
Simple Station: 64 ms standard. Half second display update rate.
Dual Station: 120 ms standard. 0.6 seconds display update rate.

Accuracy
± 0.5 % of full scale for input indication and output generation.

2-wire transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output, with short circuit protection.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
DCY-2058: 1/8 DIN (96 x 48 x 187 mm) HxWxD, (92 x 45 mm) HxW panel cutout.
DCY-2059: 1/8 DIN (48 x 96 x 187 mm) HxWxD, (45 x 92 mm) HxW panel cutout.

Weight
0.5 kg nominal.

Warranty
One year.

Pressure Controller DCY-2057

- Direct input for pressure, gases and liquids.
  Ranges: 0 to 250 mmH_2O, 1 psi, 5 psi, 15 psi, 30 psi, 100 psi, 250 psi, 500 psi and 1000 psi.
  Gauge or absolute pressure and vacuum.

- Auxiliar universal input for RTD, thermocouple, 0-55 mV, 4-20 mA, 1-5 Vdc and 0-10 Vdc.

- Mounting options in weather-proof box.

- High control capacity, performing the functions of:
  - Auto-tune.
  - ON-OFF, P-PI-PD-PID, ratio, cascade control.
  - Remote Setpoint, programmable set point up to 10 segments
  - Auto/manual station.

- Several options available:
  - Up to 2 analog output modules 4-20 mA, 1-5 Vdc and 0-10 Vdc.
  - Up to 3 alarm modules with SPDT and SPST relays.
  - Front Aspersion-proof.
  - RS-232 or RS-422/485 Communication.

Ideal for Pressure and Temperature Control in Reactors

- Robust construction in order to support the harshest conditions of industrial use.
  75 to 264 Vac, 50/60 Hz or 100 to 360 Vdc; 24 Vac/dc and 12 Vdc power supply, as ordered.

- High level of accuracy, also performs square root extraction.

- Fully programmable from the front panel. Configuration stored in non-volatile memory.

Order Code DCY-2057 - □ · □ · □ · □ · □ · □ · □ · □ · □ · □ · □

Input

Range
- 1 - 0 to 250 mmH_2O *
- 2 - 0 to 1 psi *
- 3 - 0 to 5 psi *
- 4 - 0 to 15 psi **
- 5 - 0 to 30 psi **
- 6 - 0 to 100 psi **
- 7 - 0 to 250 psi **
- 8 - 0 to 500 psi **
- 9 - 0 to 1000 psi **

Pressure Type
- 1 - Gauge
- 2 - Absolute
- 3 - Vacuum (0 to 1 atm)

Sensor Type
- 1 - For air or non-corrosive gases
- 2 - For fluids compatible with 316 Stainless Steel (sealed)

* air or non-corrosive gases
** sealed

Output 1 (Control)
- 0 - None
- 1 - 4-20 mA
- 2 - 1-5 Vdc
- 3 - 0-10 Vdc
- 4 - SPST Relay
- 5 - Open Collector Voltage
- 6 - External Solid State Relay

Output 2 (Alarm)
Same code as Output 1

Output 3 (Alarm)
- 0 - None
- 1 - SPDT Relay
- 2 - Open Collector Voltage
- 3 - Solid State Relay

Output 4 (Alarm)
Same code as Output 3

Power Supply
- 1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
- 2 - 24 Vac or 24 Vdc (±10 %)
- 3 - 12 Vdc (±10 %)
- 4 - Others, upon request

Communication
- 0 - None
- 1 - RS-232
- 2 - RS-485
- 3 - RS-422

Case Protection Grade
- 0 - General usage, protected place
- 1 - Front Aspersion-proof
- 2 - Weather-proof - IP 66

Specifications

Inputs
Input for vacuum, gauge or absolute pressure. Ranges from 250 mmH_2O to 1000 psi (Gauge Pressure). Ranges from 15 psi to 1000 psi (Absolute Pressure). Range up to 1 atm (Vacuum). Use with compressed air and non-corrosive / condutive gases, up to 5 psi. Above 5 psi, use with liquids and fluids compatible with 316 stainless steel. Auxiliar analog input for TC (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD Pt-100, under DIN-43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. 250 Ω input impedance for mA, >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.

Control Functions
ON-OFF, PID, PID with AUTO-TUNE, Ratio, Cascade and Remote Set point.

Control Output
Analog 4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc. Up to 2 optional module galvanically isolated to 300 Vac from power supply and inputs. SPST Relay rated for 3A/220 Vca. Open collector transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac maximum with isolation).

Alarm Outputs
SPDT relay rated for 3A/220 Vac. Open Collector Transistor (24 Vdc/40 mA maximum with isolation). Solid state relay (2A/250 Vac with isolation).

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Indication
Two 4-digit red leds displays (14 mm) which can be configured together with the decimal point.

Configuration
By front-panel push-buttons and internal jumpers.

Sampling Rate
130 ms standard. Half second display update rate.

Accuracy
± 1 % of full scale for the range of 250 mmH_2O.
± 0.1 % of full scale for the other pressure ranges.
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs.
± 0.5 % of full scale for analog retransmitter output, 750 Ω maximum load .

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for inputs above 10 % of span. Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C at range from 0-60 °C ambient temperature.

2-wire transmitter Power Supply
24 Vdc/50 mA maximum, isolated from output, with short circuit protection.

Span Temperature Coefficient
± 0.005 % of span / °C for auxiliar analog input.
± 0.01 % of span / °C for pressure inputs.
Reference temperature: 25 °C

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.

Weight
1.0 kg nominal.

Warranty
One year.

Universal Smart Transmitter TY-2090 / TY-2090-F

- Transmitter and / or Alarm Monitor in one instrument, it may have up to four alarm modules.
- TY-2090: Two universal standard inputs for RTD, TC, 0-55 mVdc, 4-20 mA, 1-5 Vdc and 0-10 Vdc.
- TY-2090-F: Two frequency inputs, up to 30 kHz, from 300 mVpp to 30 Vpp.
- One or two universal output for 4-20 mA, 1-5 Vdc, 0-10 Vdc, isolated from inputs.
- Programmable via serial communication or through portable configurator.
- Linearization for RTD and TC. Square root extraction.
- Configuration stored in non-volatile memory.
- DIN rail or surface assembly.
- RS-232 or RS-422/485 Communication (optional).

Order Code TY - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Model
2090: Universal Inputs
2090-F: Frequency Inputs

Output 1
0 - None
1 - 4-20 mA
2 - 1-5 Vdc
3 - 0-10 Vdc
4 - SPST Relay
5 - Open Collector Voltage
6 - Solid State Relay

Output 2
Same code as Output 1

Output 3
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 4
Same code as Output 3

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Other, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade
0 - General usage, protected place, surface assembly
1 - General usage, protected place, DIN rail assembly
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb IP 66), without display*
4 - Dust-proof

* Explosion-proof box:

Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
TY-2090: Configurable inputs for thermocouple (J, K, T, E, R, S under ITS-90), 0-55 mV, RTD Pt-100 under DIN 43760, 4-20 mA, 1-5 Vdc and 0-10 Vdc. 250 Ω input impedance for mA, >10 MΩ up to 5 Vdc and 2 MΩ above 5 Vdc.
TY-2090-F: Frequency inputs for signals up to 30 kHz, from 300 mVpp to 30 Vpp. DIN-19234 compliance for intrinsically safe NAMUR sensors.

Outputs
4-20 mA (750 Ω maximum load), 1-5 Vdc or 0-10 Vdc analog retransmitter. Up to 2 galvanically isolated module to 300 Vac from power supply and inputs. Up to 2 SPST relay modules and up to 2 SPDT relay modules, rated for 3A/220 Vac. Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Configuration
Via serial communication or MCY-20 configuration module.

Sampling Rate
120 ms standard.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, mV and Vdc inputs, with acquisition via RS-232 or RS-422/485 communication.
± 0.2 % of full scale for analog output and maximum load of 750Ω.
± 1 display resolution for frequency input.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for inputs above 10 % of span.
Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C at range from 0-60 °C ambient temperature.

2-wire transmitter Power Supply
RS-232 or RS-422/485 with 50 Vdc isolation. MODBUS®-RTU Communication Protocol.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature for acquisition by RS-232 or RS-422/485.
± 0.015 % of span / °C using 25 °C as the reference temperature for analog output.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity) (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
(140 x 53 x 175 mm) HxWxD.

Weight
0.5 kg nominal.

Warranty
One year.

Pressure to Current Converter (P/I) TY-1110-DIN

- Converts pressure signal normally 3 to 15 psi for signal 4 to 20 mA, two-wire system using semiconductor device (solid state).
- Has no moving parts, does not require the usual periodic maintenance on pneumatic tools using nozzle-baffle systems, holes, diaphragms etc.

Order Code:

TY-1110-DIN - ☐ - ☐ - ☐ - ☐

Model

Input

3/15 - 3 to 15 psig.
Other values, upon request.
Note: Values within the maximum and minimum limits of span, for absolute pressure or gauge.

Output

4/20 - 4 to 20 mAdc.

Power Supply

24 - 24 Vdc (2-wire system).

Connection

01 - Union for ¼ " flexible hose.

Code Example

TY-1110-DIN – 3/15 – 4/20 – 24 – 01.
Defines a converter TY-1110-DIN pressure to current of input 3-15 psig and output 4-20 mAdc with 24Vdc power supply and pneumatic connections type union for ¼ " flexible hose.

Specifications

Ranges
0 to 250 mmH_2O minimum.
0 to 100 psig / psia maximum.

Pressure Type
Gauge or Absolute.

Accuracy
± 0.25 % of span.

Span Temperature Coefficient
± 0.05 % / °C for process temperature variation.
± 0.01 % / °C for ambient temperature variation.

Operating Range
-5 to + 60 °C.

Overpressure
Up to two times the full scale pressure.

Power Supply
14 Vdc minimum; 45 Vdc maximum (2-wire system).

Pneumatic Connection
Union for ¼" flexible hose.

Case
Extruded anodized aluminum.

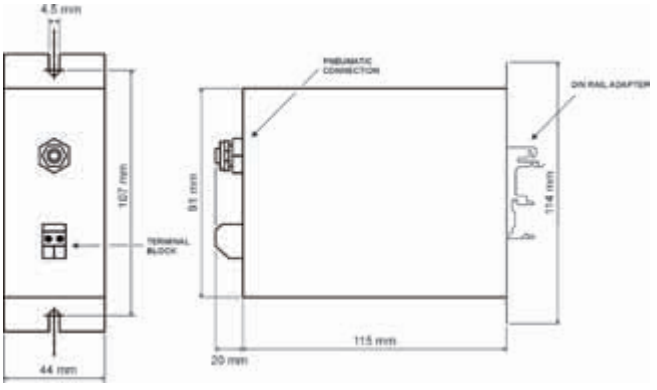
Dimensions
91 x 44 x 150 mm nominal (HxWxD).

Weight
0.5 kg nominal.

Warranty
One year.

Dimensional

Dimensional Drawing (only for mounting in protected place)



Electropneumatic Converter (I/P) Weather-proof TY-1125-TEM

- Model with weather-proof box for field mounting.

Order Code:

TY-1125-TEM - ☐ - ☐ - ☐

Model

Input
4/20 - 4 to 20 mAdc.
10/50 - 10 to 50 mAdc.

Output
3/15 - 3 a 15 psi.
3/27 - 3 a 27 psi.

Accessories
Y1 - Mounting device 2 inch tube.
Y3 - Filter with pressure regulator and pressure gauge.
Y4 - Filter.
Y5 - Pressure regulator.
Y6 - Pressure gauge.

Code Example

TY-1125 - TEM - 4/20 - 3/15 - Y1.
Defines a current to pressure converter for mounting in 2 inch tube, in weather-proof box with 4-20 mA input and 3-15 psi output.

NOTA: The filter regulator is coalescent type, of less than 5 microns, and therefore, suitable for use with TY-1125 converters.

WARNING: Be careful with the compressed air, make sure it is within the standards for instrumentation.

Specifications

Air Supply
1.6 scfm.

Pneumatic Supply
20 psi for 3-15 psi output, 30 psi maximum.
37 psi for 3-27 psi output, 40 psi maximum.

Air Demand
0.08 scfm.

Accuracy
± 0.5 % of span.

Repeatability
± 0.25 % of span.

Linearity
Less than or equal to 0.5%.

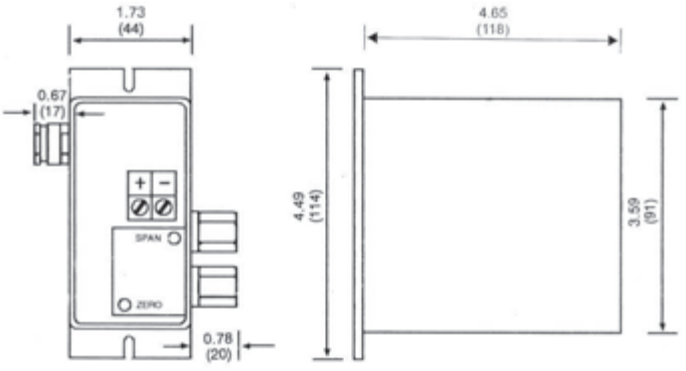
Hysteresis
Less than or equal to 0.2 %.

Temperature
-40 °C + 80 °C.

Connection
Cable gland Pg 9 (cable diameter: 4-10 mm) electrical part, 1/4 NPT pneumatic part.

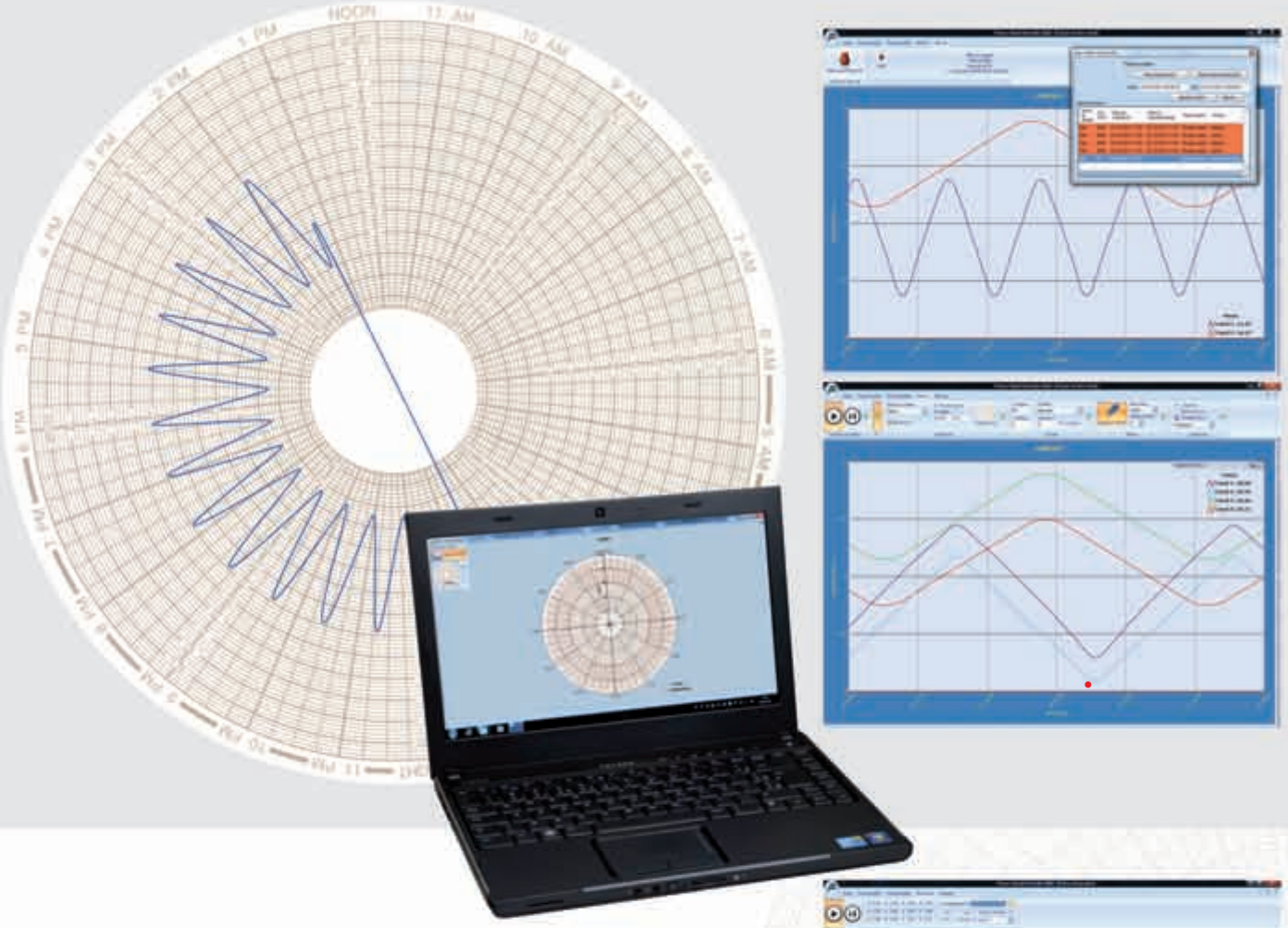
Warranty
One year.

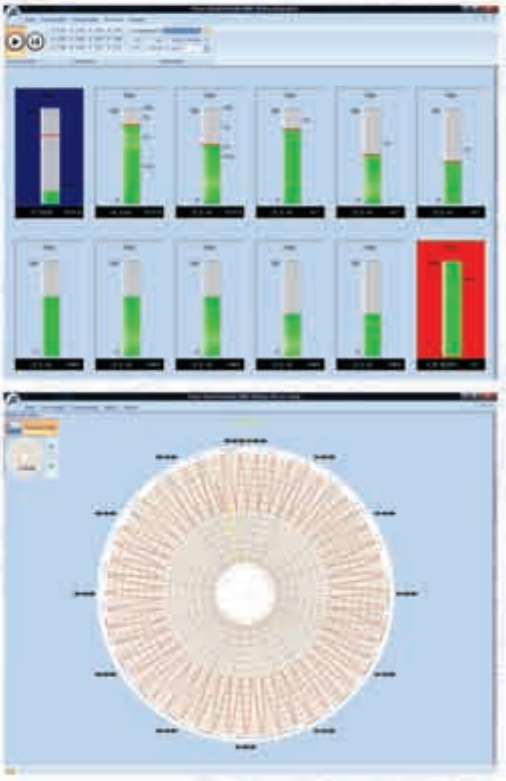
Dimensional



PRESYS

Virtual Recorder VR-2000 - 3.3





- RECORDER and DATA-LOGGER simulator software.
- Circular graphics printing with the same look of traditional physical recorders. Also offers online and historical trend graphs.
- Receives signals for register of any instrument of line 2000, mainly DMY-2015, DMY-2015-DLY, TY-2095 and TY-2095-DLY.
- It offers extensive and advanced set of functions of DATA-LOGGER and EVENTS RECORDER.
- Compatible with Windows XP® or higher, 32/64 bits.

- Simple to install, easy to use.

Example of VR-2000 use with the TY-2095 measuring 12 temperature points from thermocouple inputs. It can simulate 12 records of a pen each or 6 records of two pens, or any desired combination.

- As a Data-Logger, operating together with the DMY-2015-DLY, it allows configuration and acquisitions in field with posterior data recovery to export in spreadsheet and visualization graphics.
- Incorporates the configurator module of the Line 2000 instruments, **COMFYS-2.2**.

Specifications

- Process monitoring through trend charts and circular;
- Allows bargraphs viewing;
- View data saved in disk or database;
- Allows programming, collection and acquisitions viewing together with the DMY-2015-DLY / TY-2095-DLY;
- Allows online configuration of the Line 2000 instruments, backup and configuration recovery;
- MODBUS (RS-232/TCP) Communication Protocol;
- Data export to spreadsheet;
- Generates and saves alarm events;
- It has user access control system.

COMFYS-2.2.

- Allows remote configuration of the Line 2000 Presys instruments via MODBUS RTU / TCP (requires converter);
- It also allows the reading and storage of an instrument configuration, as well as the subsequent reloading of it.
- Available as a free download for use together with Presys Instruments in our website.
- Compatible with Windows XP® or higher 32/64 bits.

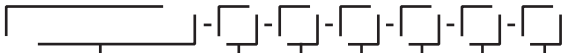
Multi-Loop Data-Logger Module

DMY-2015-DLY

TY-2095-DLY

- Available inputs for DMY-2015-DLY and TY-2095-DLY:
  - 12 thermocouple inputs.
  - 8 RTD inputs.
  - 12 current inputs 4-20 mA.
  - 12 voltage inputs 1-5 Vdc.
  - Combinations of two types of input.
- Several optional are available:
  - 2 alarm modules with SPDT relay.
  - Aspersion-proof front panel.
  - RS-232 or RS-422/485 communication.
- Data Logger function for storage of up to 256 000 readings.
- High level of accuracy. RTD and thermocouple linearization; square root extraction for mA and V inputs.
- DMY-2015-DLY: 4-digit display of high visibility and 2-digit display to indicate the channel. Fully configurable from the front panel. ACK button.
- TY-2095-DLY: DIN rail or surface mounting. Configurable via serial communication or through configuration module.

Order Code



Model
DMY-2015-DLY
TY-2095-DLY

Inputs
0 - 12 thermocouples
1 - 8 RTD
2 - 6 thermocouples and 4 RTD
3 - 12 current mA
4 - 12 voltage V
5 - 6 thermocouples and 6 current mA
6 - 6 thermocouples and 6 voltage V
7 - 6 current mA and 6 voltage V
8 - 6 current mA and 4 RTD
9 - 6 voltage V and 4 RTD

Output 1
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 2
Same code as Output 1

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Other, upon request

Communication
0 - None
1 - RS-232
2 - RS-485
3 - RS-422

Case Protection Grade

DMY-2015-DLY:
0 - General usage, protected place
1 - Front Aspersion-proof
2 - Weather-proof - IP 66

TY-2095-DLY:
0 - General usage, protected place, surface mounting
1 - General usage, protected place, DIN rail mounting
2 - Weather-proof - IP 66
3 - Dust-proof

Specifications

Inputs
Thermocouple (J, K, T, E, R, S under ITS - 90).
RTD Pt-100 under DIN 43760.
4-20 mA, 250 Ω input impedance.
1-5 Vdc, input impedance >10 MΩ.

Outputs
Two SPDT relay modules rated for 3A/220 Vac.
Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
RS-232 or RS-422/485 with 50 Vdc isolation.
MODBUS®-RTU Communication Protocol.

Indication
DMY-2015-DLY: 4-digit red leds display (14 mm), that can be configured together with the decimal point.
TY-2095-DLY: without local indication.

Configuration
DMY-2015-DLY: by front panel push buttons.
TY-2095-DLY: through the MCY-25 portable configurator.

Sampling Rate
660 ms standard, for all inputs. One second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, and Vdc.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for input above 10 % of span.
Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C in ambient temperature range from 0 to 60 °C.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
DMY-2015-DLY: 1/4 DIN (96 x 96 x 187 mm) HxWxD, (92 x 92 mm) HxW panel cutout.
TY-2095-DLY: (140 x 93 x 173 mm) HxWxD.

Weight
0.7 kg nominal.

Warranty
One year.

Data Acquisition Module TY-2095 and TY-2095-PB

PROFIBUS®

- Available models:
  - 12 thermocouple inputs.
  - 8 RTD inputs.
  - 12 current 4-20 mA inputs.
  - 12 voltage 1-5 Vdc inputs.
  - Combination of two input types.
- Eight voltage or current inputs totalization.
- Available optionals:
  - Up to two SPDT relay alarm modules.
  - RS-232, RS-422/485 Communication (MODBUS® RTU Protocol) or PROFIBUS® (DP-V0)*.
- Features DIN rail or surface mounting.
- High level of accuracy. RTD and thermocouple linearization; square root extraction for mA and V inputs.
- Configurable via serial communication or through portable configurator.

*Available only for the model TY-2095-PB

Order Code ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Model
TY-2095
TY-2095-PB

Inputs
0 - 12 thermocouples
1 - 8 RTD
2 - 6 thermocouples and 4 RTD
3 - 12 current mA
4 - 12 voltage V
5 - 6 thermocouples and 6 current mA
6 - 6 thermocouples and 6 voltage V
7 - 6 current mA and 6 voltage V
8 - 6 current mA and 4 RTD
9 - 6 voltage V and 4 RTD

Output 1
0 - None
1 - SPDT Relay
2 - Open Collector Voltage
3 - Solid State Relay

Output 2
Same code as Output 1

Power Supply
1 - 75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (any polarity)
2 - 24 Vac or 24 Vdc (±10 %)
3 - 12 Vdc (±10 %)
4 - Other, upon request

Communication
0 - None
1 - MODBUS (RS-232)*
2 - MODBUS (RS-485)*
3 - MODBUS (RS-422)*
4 - PROFIBUS DP-V0 (RS-485)**

Case Protection Grade
0 - General usage, protected place, surface mounting
1 - General usage, protected place, DIN rail mounting
2 - Weather-proof - IP 66
3 - Explosion-proof (Ex d IIB T6 Gb 66), without display***
4 - Dust-proof

* Only available for the model TY-2095
** Only available for the model TY-2095-PB

*** Explosion-proof box:
Dimensions
310 x 310 x 200 mm (HxWxD)
Weight
11 kg nominal

Specifications

Inputs
Thermocouple (J, K, T, E, R, S under ITS - 90).
RTD Pt-100 under DIN 43760.
4-20 mA with input impedance of 250 Ω.
1 to 5 Vdc with input impedance >10 MΩ.

Outputs
Up to 2 SPDT relays rated for 3A/220 Vac.
Logic signal, open collector transistor, 24 Vdc/40 mA maximum with isolation. Solid state relay, 2A/250 Vac with isolation.

Serial Communication
TY-2095: RS-232 or RS-422/485. MODBUS®-RTU Communication Protocol.
TY-2095-PB: PROFIBUS® DP-V0: RS-485.

Indication
Without local indication. Maximum range from -999 to 9999 viewed through the MCY-25 Configuration Module.

Totalization
Totalization of eight voltage or current inputs ranging from 0 to 9999, configured with the decimal point.

Configuration
Through MCY-25 portable configurator.

Sampling Rate
480 ms standard, for all inputs. One second display update rate.

Accuracy
± 0.1 % of full scale for TC, RTD, mA, Vdc.

Linearization
± 0.1 °C for RTD and ± 0.2 °C for TC.

Square Root Extraction
± 0.5 % of reading, for input above 10 % of span.
Programmable Cut-off from 0 to 5 %.

Cold Junction Compensation
± 2.0 °C in ambient temperature range from 0 to 60 °C.

Span Temperature Coefficient
± 0.005 % of span / °C using 25 °C as the reference temperature.

Power Supply
75 to 264 Vac 50/60 Hz or 100 to 360 Vdc (10 W nominal); 24 Vac/dc (±10 %); 12 Vdc (±10 %).

Operating Range
0 to 60 °C temperature and 90 % maximum relative humidity.

Dimensions
140 x 93 x 173 mm HxWxD.

Weight
0.7 kg nominal.

Warranty
One year.

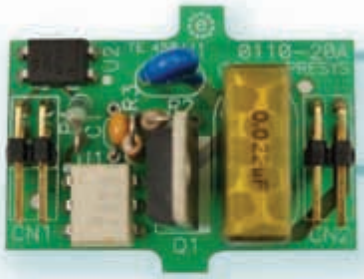
Accessories

Analog Output Module MSAN-20

Generates 4-20 mA, 1-5 Vdc, 0-10 Vdc signals. For use as a control output or retransmitter output of the process variable.

Relay Output Module MALRE-20

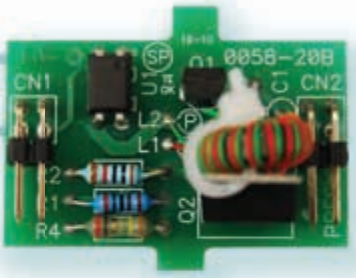
Electromechanical relay for use in control or alarm, current up to 3A in 220 Vac. It has RC circuit (snubber) to eliminate the noise caused by contacts opening / closing . Depending on the application, this snubber must be disabled to allow the passage of a little AC current.



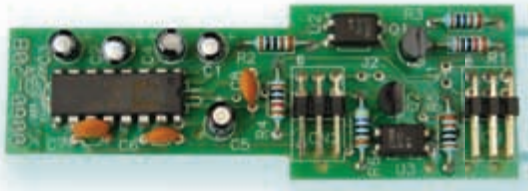
Solid State Relay Output Module MALRS-20

Semiconductor relay for current up to 1A. Suitable for inductive loads, especially solenoids and contactors. It can not be used in direct current.

Pulsed Output Module MSD-20

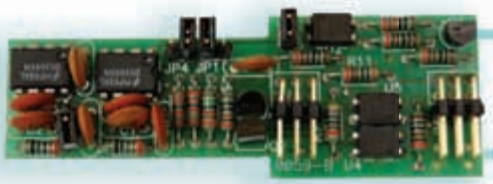


Also called Logic Output or Open Collector Output. Generates 24 V voltage signal in PWM. Used to activate external power units such as thyristor unit.



RS-232 Communication Module MCOM RS232

RS-232 interface for communication for connecting one single instrument to the computer. Maximum distance 15 meters.

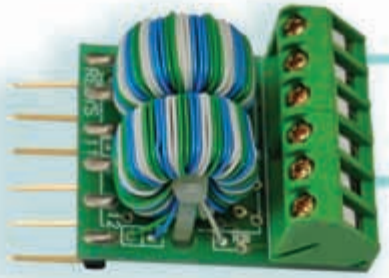


RS-485Communication Module MCOM RS-485

RS-485 Communication Interface, to connect up to 31 instruments in a network with the computer. Maximum distance 1200 meters.

Power Filter FLAY-02

Used when the mains power signal has great intensity of high frequency noise.



Filter for Input Signal FLSY-03/FLSY-06

With three or six pins, for filtering electrical noise present in the input signal.

External Thyristor Power Unit MTY-48D10

Used for controlling loads up to 10 Aac. It is necessary that the instrument has the Open Collector Module MSD-20. Other types of thyristor unit are available on request.

Configurators MCY-20/MCY-25/MCY-55

For use with instruments TY-2090, TY-2095, DCY-2055. It allows its configuration by keyboard and display.

Converter Unit RS-232/485UNICONV232/485

Used for a network connection of the instruments to the computer serial port.

Explosion-proof Panel for Line 2000 Instruments

- The Presys Explosion-proof box was especially developed for instruments used in the Industrial Process as Indicators, Controllers and Transmitters.

Main Features:

- Applicable in area of explosive atmosphere, consisting of combustible gases, classified as Zone 1 Group IIB.

- Fully protected against dust and water jets.

- Certificate of Conformity to Electrical Equipment for Potentially Explosive Atmospheres, by IEE-USP and TÜV RHEINLAND, with the marks Ex d IIB T6 Gb IP66.

- Fully programmable by the front panel push-buttons, via serial communication or through portable configurator as specified model.

Explosion-proof Models with Horizontal Display

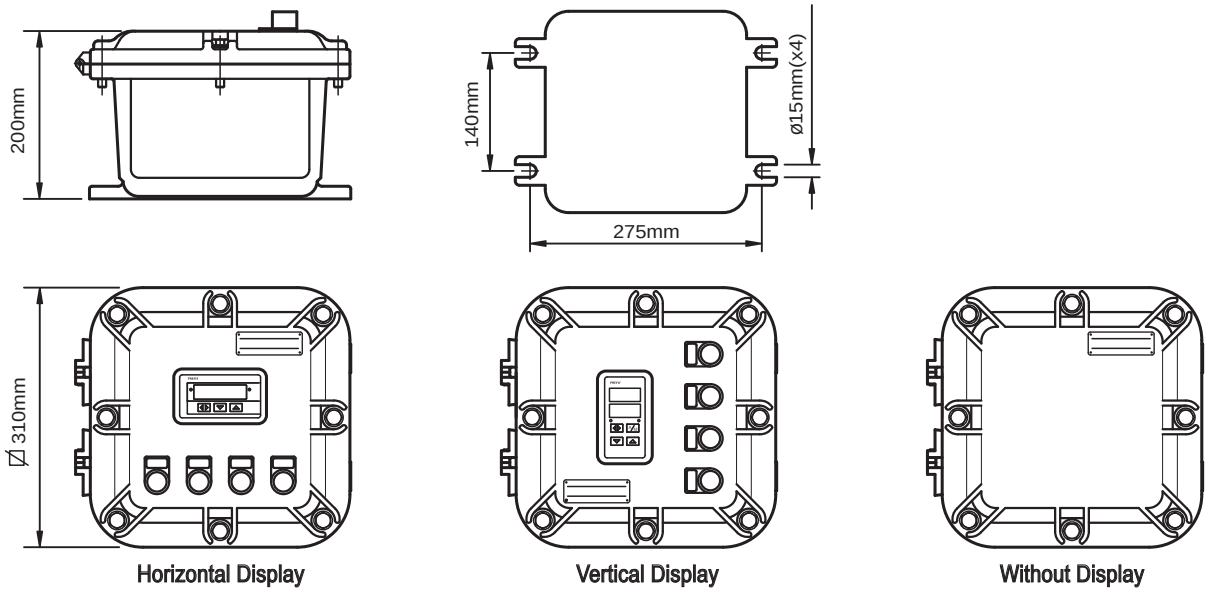
DMY-2030, DMY-2030-F, DMY-2030-TOT, DMY-2030-TOT-F, DMY-2030-Light, DMY-2030-F-Light, DMY-2030-TOT-Light, DMY-2030-TOT-F-Light, DMY-2030-CC, DMY-2030-CV, DMY-2030-TOT-FCS, DMY-2031-FCS, DMY-2036, DMY-2036-F, DMY-2011, DMY-2011-F, DMY-2015, DMY-2015-PB, DCY-2051, DCY-2051-F, DCY-2051-Light, DCY-2051-F-Light, DCY-2051-LC, DCY-2059, DCY-2060, DCY-2060-F, DCY-2060-Light, DCY-2060-F-Light, DCY-2060-LC.

Explosion-proof Models with Vertical Display

DMY-2035, DMY-2035-F, DCY-2050, DCY-2050-F, DCY-2050-Light, DCY-2050-F-Light, DMY-2050-LC, DCY-2058.

Explosion-proof Models Without Display

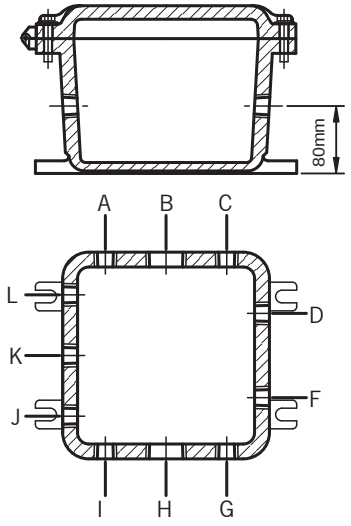
DCY-2055, TY-2090, TY-2090-F, TY-2095.



Horizontal Display | Vertical Display | Without Display

NOTE: Command buttons with mounting option for 1, 2, 3, 4 buttons or none.

Threaded Entrances Layout.



ø NOMINAL (NPT)	POSITION										
	A	B	C	D	F	G	H	I	J	K	L
3/4"	●	●	●	●	●	●		●	●	●	●
1"		●					●				
1.1/4"		●					●				
1.1/2"		●					●				

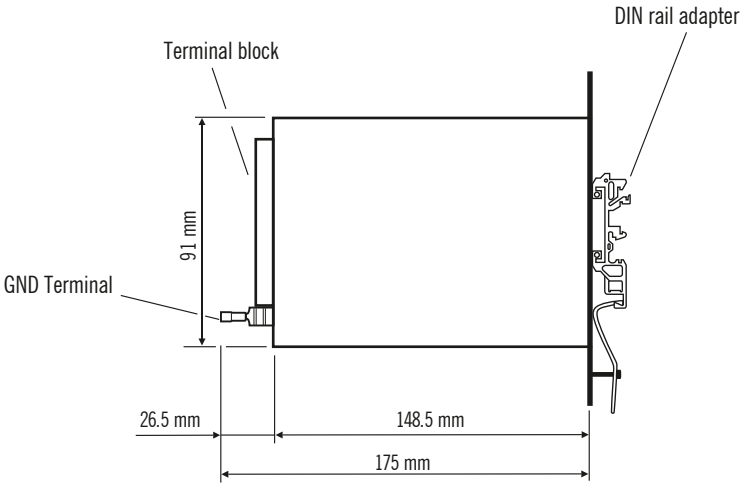
ORDER CODE EXAMPLE: EXPLOSION-PROOF INDICATOR

DMY-2030 - 0 - 0 - 0 - 0 - 1 - 0 - 3 (G3/4 + H1 + I3/4)

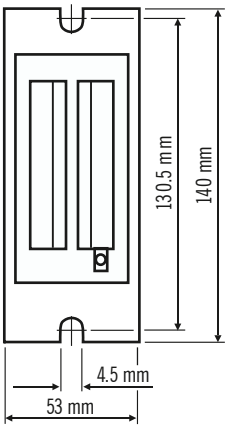
- MODEL
- OUTPUT 1
- OUTPUT 2
- OUTPUT 3
- OUTPUT 4
- POWER SUPPLY
- SERIAL COMMUNICATION
- CASE PROTECTION GRADE
- CHOSEN POSITIONS

Dimensional Drawings

Models: TY-2090 and DCY-2055

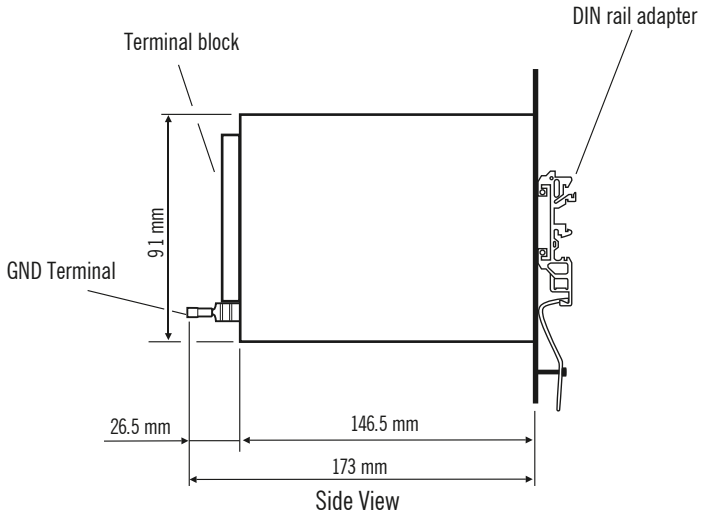


Side View

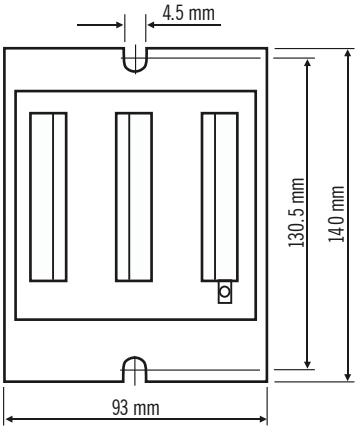


Front View

Models: TY-2095/ TY-2095-PB/ TY-2095-DLY



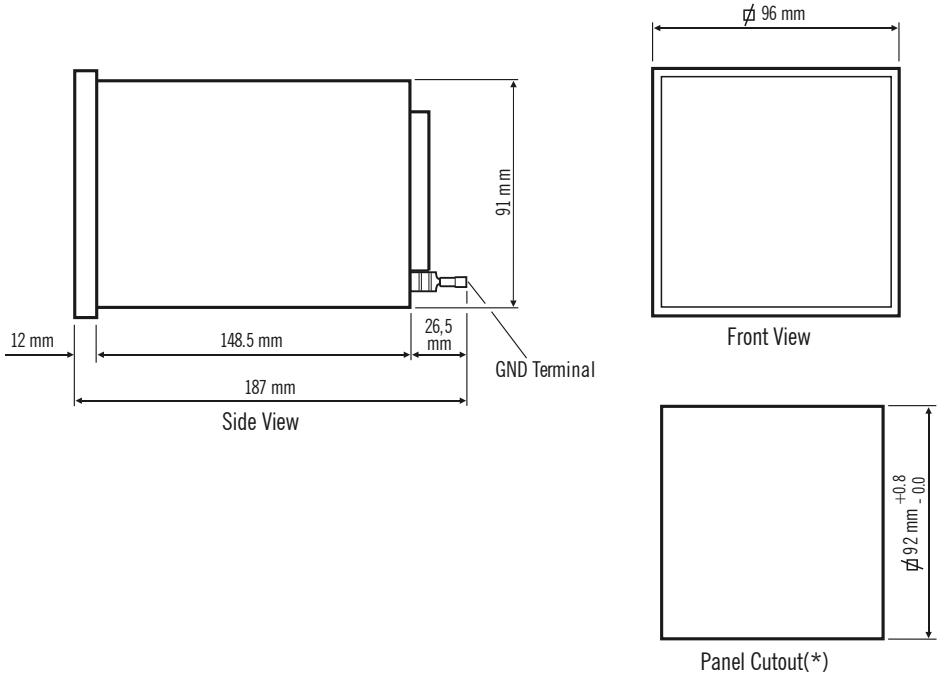
Side View



Front View

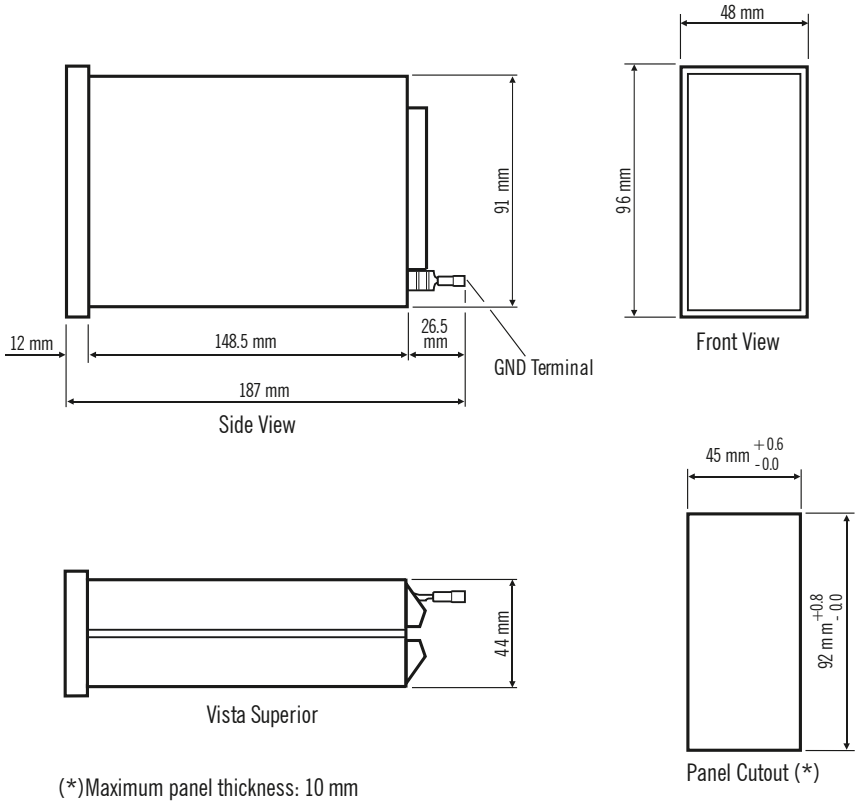
1/4 DIN Models

DMY-2011, DMY-2015, DMY-2015-PB, DMY-2015-DLY, DMY-2017, DMY-2017-Light, DCY-2057, DCY-2060, DCY-2060-LC and DCY-2060-Light



1/8 DIN Models with Vertical Orientation

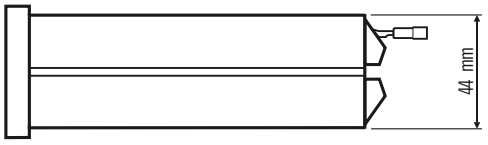
DMY-2035, DCY-2050, DCY-2050-LC, DCY-2050-Light and DCY-2058



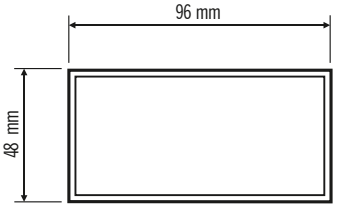
(*)Maximum panel thickness: 10 mm

1/8 DIN Models with Horizontal Orientation

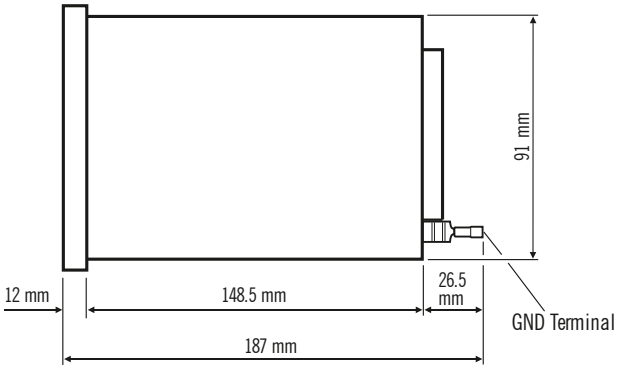
DMY-2030, DMY-2030-Light, DMY-2030-TOT, DMY-2030-TOT-Light, DMY-2030-CC, DMY-2030-CV, DMY-2031-FCS, DMY-2030-TOT-FCS, DCY-2051, DCY-2051-LC, DCY-2051-Light, DCY-2059 and DMY-2036



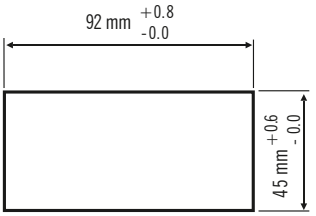
Side View



Front View

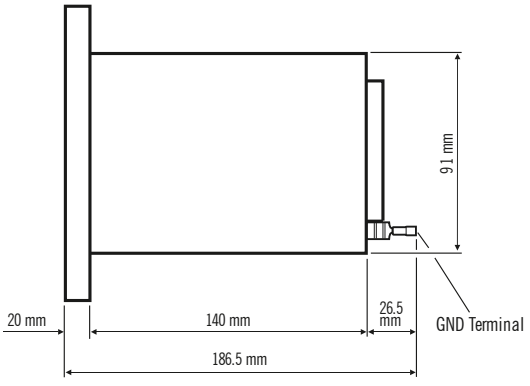


Upper View

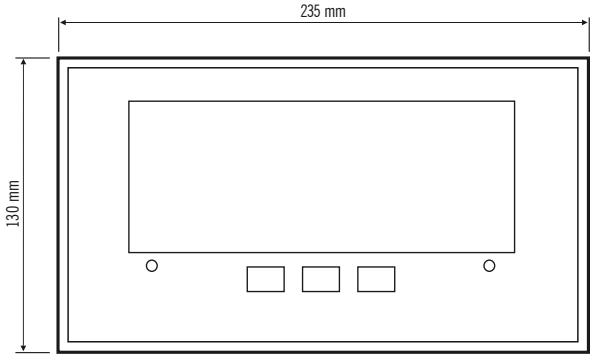


Panel Cutout(*)

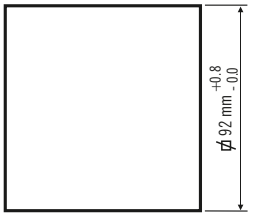
Model: DMY-2032



Side View



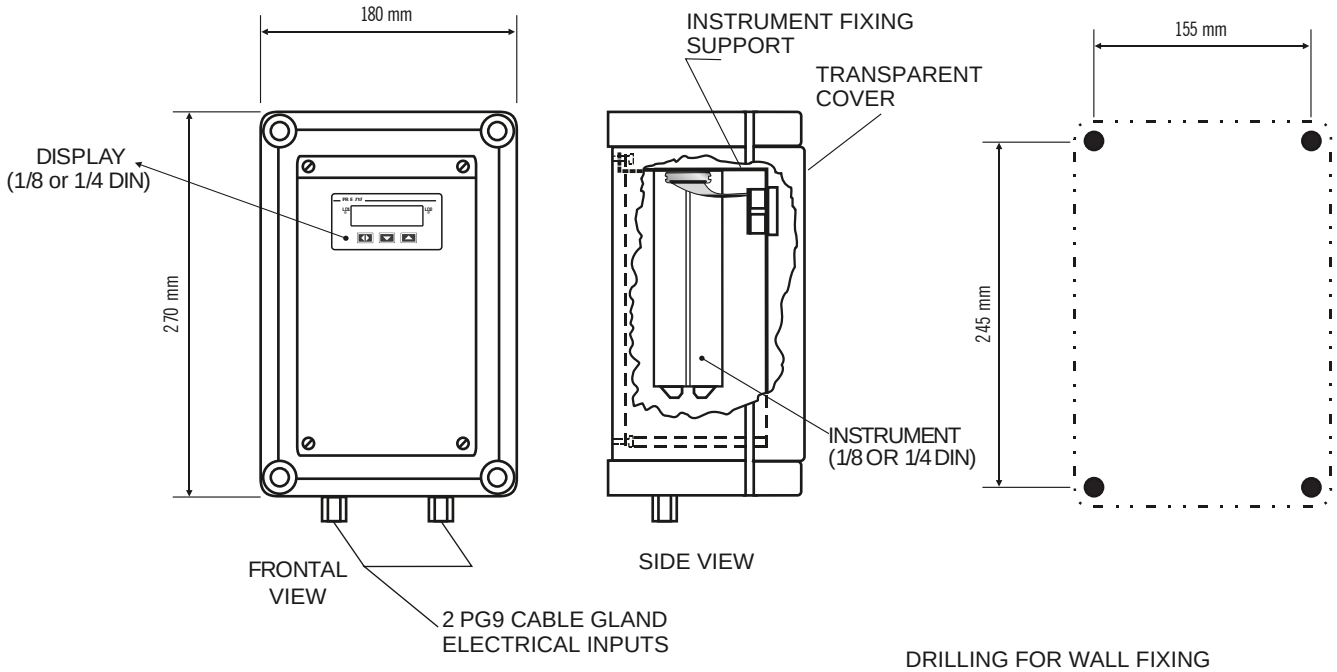
Front View



Panel Cutout(*)

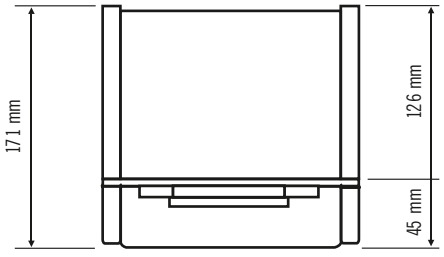
(*)Maximum panel thickness: 10 mm

Weather-proof Models - IP 66

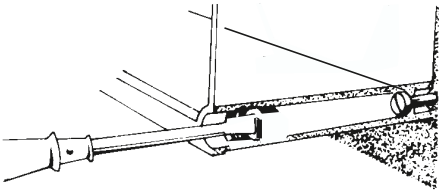


DRILLING FOR WALL FIXING

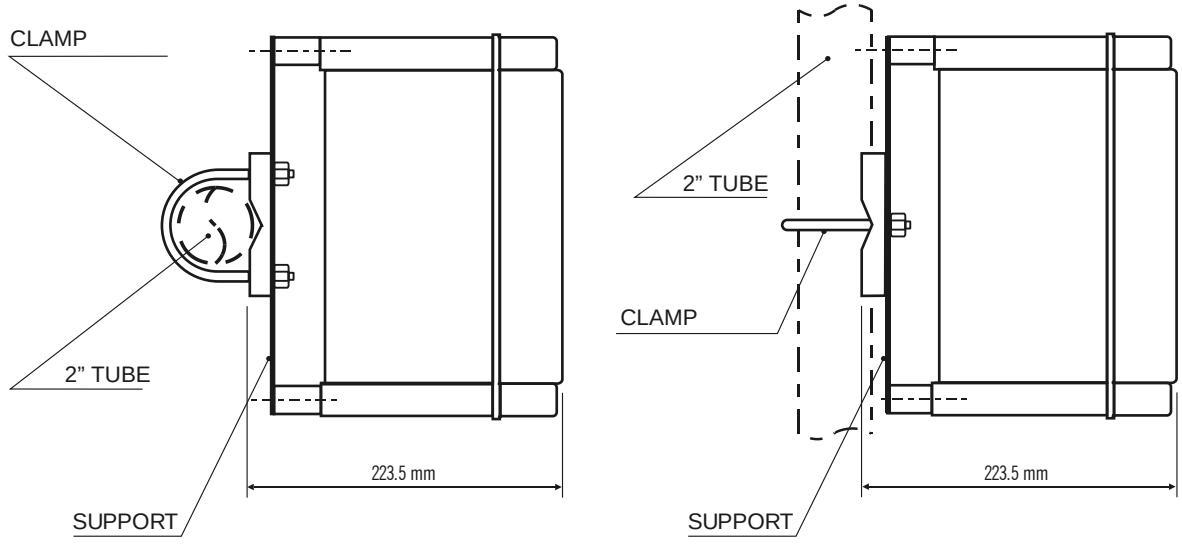
USE SCREW DIAMETER = 6.0 mm
SCREW HEAD MAXIMUM DIAMETER = 10.0 mm
MINIMUM LENGTH = 30.0 mm



UPPER VIEW



BOX FOR WALL FIXING



ASSEMBLY WITH 2 " TUBE SUPPORT
HORIZONTAL AND VERTICAL

HART Field Communicator FCY-15

- Hart Configurator, with DD library, configures device specific parameters.
- 25 Vdc Power supply for 2-wire transmitters.
- Configurable 250 Ω internal resistor.
- 5.7" high visibility touch screen display.
- Portable, powered by rechargeable batteries for field use.
- Configurador Hart Full.
- USB software update.

PRESYS
Instrumentos e Sistemas

Rua Luiz da Costa Ramos, 260
São Paulo - SP - 04157-020
Tel: (11) 3056.1900
Fax: (11) 5073.3366
http://www.presyscorp.com
E-mail: vendas@presys.com.br

MANAGEMENT SYSTEM
TÜVRheinland
Brasil
NBR ISO 9001
QUALITY

Calibração
NBR ISO/IEC
17025
CAL 0193

TÜVRheinland
OCP 0004